



# **State of Montana**

## **Teachers' Retirement System**

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### **Agency IT Plan**

#### **Fiscal Year 2012-2017**



April 2012  
Version 1.0

# TABLE OF CONTENTS

**EXECUTIVE SUMMARY .....1**

**SECTION 1: AGENCY ADMINISTRATIVE INFORMATION .....2**

**SECTION 2: AGENCY IT MISSION .....3**

**SECTION 3: AGENCY REQUIRED PROGRAMS .....4**

**SECTION 4: AGENCY IT PLAN – GOALS & OBJECTIVES .....6**

**SECTION 5: IT INITIATIVES (FY2012 – FY 2017).....10**

**SECTION 6: ENTERPRISE ALIGNMENT.....11**

**SECTION 7: PLANNED AGENCY IT EXPENDITURES .....12**

**SECTION 8: ADDITIONAL INFORMATION - OPTIONAL .....13**

## EXECUTIVE SUMMARY

The Montana Teachers' Retirement System has a stable and functional information technology environment that serves the needs of its staff, members, and retirees. However, the agency understands the need to update systems to ensure future functionality and enhance services for members. It is critical that IT systems support the agency mission "To promote long-term financial security for our membership while maintaining the stability of the fund."

While Pension+, the current pension management system, is stable it is built on aging software. The ability of TRS to fulfill its mission is dependent on the pension system being both stable and adaptable. Migrating the underlying database to a modern database such as Oracle or Microsoft SQL server will provide increased functionality in queries, reports, and data analysis. It also means the agency has a broader support network to maintain the database critical to operations. Updating the software used to access the database will improve staff operations in support of members and retirees. It also will provide improved web and mobile access to members for their retirement planning and account monitoring.

The agency is testing a database migration and will determine the best method for migrating data in the summer of 2012. Further analysis will be done on rebuilding the current system with a new web-based application front end or possibly purchasing a commercial pension management system. In either case, migrating the database to Oracle is a critical first step. An agency IT initiative is planned and will be based on the analysis. Costs will be determined at that time.

TRS has already improved the hardware platform used to support operations. The agency HP blade center allows server consolidation and virtualized workstations. The blade center is housed in the State of Montana Data Center which provides for security, backup power, and lower operational and cooling costs. The agency has already recovered most of the costs of the system through reduced hardware purchases. The agency anticipates replacement of this equipment in the FY2014-15 time frame with the goal of continued system improvement and reduced costs.

With completion of the State of Montana Data Center in Miles City, TRS will consider backup and disaster recovery operations at that location. Backup of critical agency data outside of Helena would improve disaster and business recovery for the agency. Hardware hosting, services, and other requirements will be examined during FY2013.

Planning for ongoing security of information and IT systems is also critical for TRS. Security policies and procedures have been reviewed and staff have been provided IT security training. An agency IT Security Program plan is under development and will be finalized by July 2012. The plan will address security of TRS data from both the policy and practical standpoints.

Staff is continuing to monitor information technology trends, including mobile computing, cloud-based applications and storage, virtualization of hardware, and software and IT security.

## SECTION 1: AGENCY ADMINISTRATIVE INFORMATION

### ***Role: Plan Owner***

Name: TRS Board – represented by David Senn, Executive Director  
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### ***Role: IT Contact***

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### ***Role: Information Security Manager (ISM)***

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### ***IT Inventory***

The IT inventory database located at <http://mine.mt.gov/enterpriseitinventory> was or will be updated in May 2012.  
As required by MCA 2-17-524(3)(c); the plan will be updated by June 30<sup>th</sup>, 2012.

## SECTION 2: AGENCY IT MISSION

The mission of the TRS Information Technology Staff is to provide the IT systems, services, security, analysis, and work product needed by TRS staff, members, and benefit recipients. TRS IT staff and systems support the long-term financial security of the TRS membership while maintaining the stability of the fund. The TRS Information Technology staff does this by fulfilling their commitments in the following areas:

### Customer Service

- Maintain a secure and stable computing environment so expected services are easy to use, accurate, and available even in a disaster.
- Develop and maintain a permanent and secure information repository for TRS and its members.
- Interact and communicate with customers to clarify their needs and suggest improvements based on our specialized knowledge.
- Produce analysis, applications, and services that are secure, reliable, and useful to TRS employees and members.
- Act with integrity, sincerity, and respect to provide the best possible solutions.

### Effectiveness and efficiency in producing quality work

- Learn continuously to attain and maintain quality in all of our work.
- Coordinate our efforts in order to conserve scarce resources while generating products that are effective, easy to use, and a good value.
- Apply our knowledge creatively and consistently to provide timely and accurate solutions to problems.

### Responsiveness to a changing environment

- Adapt our methods to optimize the use of emerging information technology.
- Design processes and applications to provide a smooth transition between successive versions or changes of platforms.
- Assess present equipment, software, and processes to facilitate a smooth migration to future technologies and business processes.

## SECTION 3: AGENCY REQUIRED PROGRAMS

### *Information Security Management (ISM) Program General Description*

Montana Teachers' Retirement System has implemented an agency information security management program compliant with §2-15-114, MCA, and State Information Technology Systems Division *Information Security Programs* policy with adoption of the National Institute of Standards and Technology (NIST) Special Publication 800 series as guides for establishing appropriate security procedures. This is in alignment with the State of Information Technology Service's direction for an enterprise approach to protect sensitive and critical information being housed and shared on State and/or external/commercial information assets or systems.

As described in NIST SP 800-39, the agency has developed and adopted the Information Risk Management Strategy to guide the agency through information security lifecycle architecture with application of risk management. This structure provides a programmatic approach to reducing the level of risk to an acceptable level, while ensuring legal and regulatory mandates are met in accordance with §2-15-114, MCA.

The agency's program has four components, which interact with each other in a continuous improvement cycle. They are as follows:

- Risk Frame – Establishes the context for making risk-based decisions.
- Risk Assessment – Addresses how the agency will assess risk within the context of the risk frame; identifying threats, harm, impact, vulnerabilities, and likelihood of occurrence.
- Risk Response – Addresses how the agency responds to risk once the level of risk is determined based on the results of the risk assessment; e.g., avoid, mitigate, accept risk, share, or transfer.
- Risk Monitoring – Addresses how the agency monitors risk over time; "Are we achieving desired outcomes?"

The agency's information security management program is challenged with limited resources, notably manpower and funding. While alternatives are reviewed and mitigation efforts are implemented, the level of acceptable risk is constantly challenged by the ever changing technology and associated risks from growing attacks and social structure changes. Specific vulnerabilities have been identified which require restructure, new equipment, or personnel positions (funds increase), and are addressed below in our ongoing Security Program Plans.

### *Ongoing Security Program Plans*

Trust is essential in the TRS business model. TRS members and benefit recipients expect TRS not only to keep accurate records, but to secure these records in all circumstances – in day-to-day operations, archiving of records, and in business recovery. Breaching the trust of TRS members and benefit recipients is costly and threatens the security of the retirement system in practical and political ways. Therefore, the TRS security program seeks to monitor and improve security on an ongoing basis. The security plan covers policy, daily practice and monitoring, external reviews, and security planning as a part of future operations.

Rick Bush is the designated Information Security Program Manager. A constraint of the TRS security program is the limited number of staff to perform and carry out tasks related to security policy and implementation. TRS has used DOA services and training to begin building a business recovery model. The agency can expect to spend additional funds during coming years for redundant hardware, disaster recovery testing, and IT services to implement its security program. No agency funding is at risk if the agency does not meet requirements for information security. However, meeting information security goals is a priority of the TRS board and staff.

TRS information technology personnel have had full background checks. Background checks have been completed to provide IT staff access to the State of Montana Data Center and to provide assurances on secure access to sensitive information.

Daily practice consists of securing computers, renewing passwords every 60 days, monitoring building access, securely disposing of paper, monitoring security alerts, patching and updating software, monitoring logs, scanning computers for viruses and vulnerabilities, and other daily security tasks that arise. All critical systems and databases are housed in the State of Montana Data Center and an encrypted backup is maintained at the TRS location in a

locked room. Unused services and data are tagged as inaccessible. TRS recently upgraded its equipment. The upgrade allows all workstation and servers to be virtualized, eliminating desktops. A second redundant system or service is expected to be available by FY2014, with possible system backups at the Miles City Data Center.

TRS participates in a security scan of its computer by DOA security staff to access vulnerabilities in the configuration or operation of the TRS servers and workstations. These external reviews provide a trusted third party to examine the TRS computer for potential security threats. TRS keeps its computers on a separate branch of the state computer network, making it easier to isolate activity to the TRS network traffic.

### ***Continuity of Operations (COOP) Capability Program General Description***

In July 2009, TRS joined with the Department of Administration *Continuity Services* for the development of our agency's Continuity of Operations Plan, which provides the structure to facilitate response and recovery capabilities to ensure the continued performance of the State Essential Functions of Government. This program involves two blocks of focus. The first is to regularly review the Business Continuity Plans (BCP), including specific business processes or activity plans such as Emergency Action Plans (EAP), Information System Contingency Plans (ISCP), Communications Plans, Incident Management Plans, and more. We have completed 97 percent of the BCP and expect full completion of two phases of the BCP by July 2012. This program is not a standalone process in that information which is identified and recorded under this structure can and often exists in the Records Management Program and associates with Information Security Management Program requirements.

Integration of these three programs is critical to the confidentiality, integrity, and availability of information, which is associated with each program.

### ***Future COOP Program Plans***

TRS IT staff will complete the Introduction to LDRPS and Montana Continuity Planning in FY2012. Ongoing training and testing of agency COOP plans will be conducted annually.

## SECTION 4: AGENCY IT PLAN – GOALS & OBJECTIVES

### *Goal Number 1:*

#### **IT Goal 1** Pension+ Application/System Upgrade

**Description:** The current Pension+ pension management application is in need of a system upgrade. The current system – based on OpenVMS, Powerhouse, and RMS – is stable and functional. However, the maintenance of the current system is becoming more difficult. A modern database (Oracle or Microsoft SQL) would improve ongoing support options, and a new application front-end could improve functionality.

**Benefits:** Improved support both internally and from contractors. Improved system access for staff, members and retirees.

**Which state strategic goal(s) and/or objective(s) does your goal address?** Goal 2: Aggressively use technology to extend capabilities that enhance, improve, and streamline service delivery.

### **Supporting Objective/Action**

#### **Objective 1-1** Analyze buy versus build options for Pension+ Upgrade

**Describe the business requirements or business problem driving this objective:** Teachers' Retirement System plans to determine the costs, effort, and capabilities of two primary options – rebuilding its current system or buying a commercially available software solution.

**Describe the benefits to be derived from the successful completion of this objective:** TRS will have a clear plan on the pros and cons of migrating the current database to a new database format and building a new front-end as compared with buying commercial software and having a vendor convert the system. The analysis will provide cost comparisons, system requirements, and staffing needs with both options.

**Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective):** This option reduces risk by providing critical system analysis early in the process. The major risk is staff availability and developing a clear understanding of the options and tradeoffs.

**What is the timeframe for completion of this objective?** Spring 2013.

**Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed?** The agency will present a buy-versus-build analysis to the TRS board.

### **Supporting Objective/Action**

#### **Objective 1-2** Migrate Pension+ database

**Describe the business requirements or business problem driving this objective:** A first step in upgrading Pension+ will be a test conversion of the current RMS database used by Pension+ to an Oracle database. The new database will be tested and if successful the current application front end will be connected to the database.

**Describe the benefits to be derived from the successful completion of this objective.** With the Pension+ database in Oracle, the agency can do more analysis on the data, find technical support, and will have the data in a format that can be used by either a new front-end build or a purchased application.

**Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective).** There are no major risks with the conversion of the database. The current database will be maintained as is until the front end is connected to the new database and systems are tested. The old database will then be archived.

**What is the timeframe for completion of this objective?** Testing should be done by July 2012.



Complete database conversion will take place in Fall 2012 depending on results of testing.

**Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed?** Completion of the database conversion will provide better insight into the build-versus-buy analysis; a database containing all current system data will provide better continuity for future upgrades.

### **Supporting Objective/Action**

**Objective 1-3** Monitor MPERA progress on implementing a new pension management system

**Describe the business requirements or business problem driving this objective:** Teachers' Retirement System will monitor Montana Public Employee Retirement Administration's implementation of Sagitec Solutions Pension Administration System to determine if the system can be used for TRS.

**Describe the benefits to be derived from the successful completion of this objective:** TRS will have a better understanding of the options for purchase of a commercial software solution.

**Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective):** None.

**What is the timeframe for completion of this objective?** Spring 2013.

**Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed?** The agency will include information on MPERA progress in its buy-versus-build analysis for the TRS board.

### **Goal Number 2:**

**IT Goal 2** Improve the process for imaging agency records

**Description:** TRS currently uses FileNet for imaging agency records. The goal is to decide if the agency stays with FileNet or migrates to another imaging solution.

**Benefits:** Migrating to an open-source imaging solution could save the agency money and provide for integrating imaging and online records with the pension management system.

**Which state strategic goal(s) and/or objective(s) does your goal address?** Goal 2: Aggressively use technology to extend capabilities that enhance, improve, and streamline service delivery.

### **Supporting Objective/Action**

**Objective 2-1** Examine alternatives to FileNet

**Describe the business requirements or business problem driving this objective:** Teachers' Retirement System needs to examine the costs and associated benefits or problems with document imaging.

**Describe the benefits to be derived from the successful completion of this objective:** TRS will have a better understanding of the options for imaging records for the agency.

**Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective):** None.

**What is the timeframe for completion of this objective?** Spring 2013.

**Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed?** The agency will provide a cost-benefit analysis for the TRS board on future imaging.

### **Supporting Objective/Action**

**Objective 2-2** Integrated TRS imaging systems with the Pension system

**Describe the business requirements or business problem driving this objective:** The goals include improved access to member and retiree records for staff. Tying together the pension management system and record management would provide for improved business processes and service to our members.

**Describe the benefits to be derived from the successful completion of this objective:** Connecting the agency imaging solution with Pension+ or future pension management software would allow for staff to see critical records online while managing member and retiree information.

**Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective):** Difficulty in connecting to separate systems.

**What is the timeframe for completion of this objective?** Spring 2014.

**Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed?** Users of the pension management system will have access to imaged records online.

### *Goal Number 3:*

**IT Goal 3** Update the agency website

**Description:** TRS sees a need for an updated agency website to provide information to members, retirees, and the public as well as improved access to agency services.

**Benefits:** A website redesign would provide improved access to agency information and services. It would also allow for better access by mobile devices, including tablets and smartphones.

**Which state strategic goal(s) and/or objective(s) does your goal address?** Goal 3: Build an infrastructure/architecture that provides citizens and employees of the state access to information however and whenever they need it.

### **Supporting Objective/Action**

**Objective 3-1** Redesign the website templates

**Describe the business requirements or business problem driving this objective:** The look and feel of [www.trs.mt.gov](http://www.trs.mt.gov) is getting old and needs update. Members need quick access to current information on their pensions and ability to see what is happening with legislation.

**Describe the benefits to be derived from the successful completion of this objective:** TRS will improve the look and feel, navigation, and functionality of its website and improve mobile device access. Updates to the front page and content will take place during 2012 with a complete redesign planned for 2013.

**Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective):** None.

**What is the timeframe for completion of this objective?** Front page and content revamp - Summer 2012. Complete website redesign and possible restructuring – Summer 2013.

**Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed?** A new design will be approved by management and the board and implemented for the agency.

### *Goal Number 4:*

**IT Goal 4** Study use of mobile technology for TRS Board

**Description:** Determine the benefits and tradeoffs of providing board members with mobile devices for access to board information.

**Benefits:** Reduced paper, improved access to board materials, and easier distribution of materials.

**Which state strategic goal(s) and/or objective(s) does your goal address?** Goal 3: Build an infrastructure/architecture that provides citizens and employees of the state access to information however and whenever they need it.

### **Supporting Objective/Action**

**Objective 4-1** Study use of tablets or laptops and methods for delivering information to the board

**Describe the business requirements or business problem driving this objective:** Determine the costs and costs savings of using tablets and smart devices for access to board information.

**Describe the benefits to be derived from the successful completion of this objective:** Availability of tablets, smartphones, and small laptop computers provides a means of distributing information to the TRS board in a manner that improves access and reduces waste and reprinting of materials.

**Describe the anticipated risks associated with this objective. (e.g., risks associated with inaction or not completing this objective; risks associated with completing this objective):** None.

**What is the timeframe for completion of this objective?** Fall 2012.

**Describe the critical success factors associated with this objective; i.e., how will you know when it has been successfully completed?** The board will decide if electronic delivery of board packets improves board functions and operations.

## SECTION 5: IT INITIATIVES (FY2012 – FY 2017)

### **Initiative 1** Pension+ Application/System Upgrade

Description: This Initiative is still in the information gathering phase. TRS is investigating options to migrate the system database to Oracle or Microsoft SQL Server and either rebuild the front end as a web-based application or purchase a pension management software system.

EPP Number (if applicable)

## SECTION 6: ENTERPRISE ALIGNMENT

### *Communities of Interest Participation*

- ☒ Government Services
- ☐ Public Safety
- ☐ Human Resources
- ☐ Environmental
- ☐ Education
- ☒ Economic
- ☐ Cultural Affairs
- ☒ Finance

TRS is involved in communities of interest that promote the long-term financial security for TRS membership while maintaining the stability of the TRS fund. A natural partner is the Montana Public Employees Retirement Administration (MPERA). The Retirement community could fit within Government Services, Human Resources, Economics, and/or Finance depending on the nature of the shared interest. At this time, the highest ranking issue for TRS is the update to its retirement system, but this work depends to some extent on MPERA direction for new pension software, TRS board direction, and the Legislature. TRS continues to work with the state Information Technology Managers Council, Network Managers Group, Information Security Managers Group, and State Project Management Office.

## SECTION 7: PLANNED AGENCY IT EXPENDITURES

<u>Expense Category</u>	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>
Personal Services	\$175,290	\$175,290	\$178,795	\$182,370	\$186,020	\$189,746
Operating Expenses	\$145,000	\$147,900	\$150,858	\$153,875	\$157,000	\$160,140
Initiatives		\$250,000	\$250,000	\$200,000		
Other expenditures						
<b>Totals</b>	\$320,290	\$573,190	\$579,653	\$536,245	\$343,020	\$349,886

## SECTION 8: ADDITIONAL INFORMATION

The agency will have an Information Security Risk Management Strategy completed by July 1, 2012, in compliance with §2-15-114, MCA, and MOM Policy 1240.X08.